IBM System x3690 X5

Ground-breaking two-socket server delivers outstanding performance, memory and storage

Highlights:

- Achieve four-socket performance at a two-socket investment
- Grow to meet changing workload demands with unmatched memory expansion
- Own and operate your systems with less complexity and cost
- Get peace of mind with enterprise-class reliability and availability

EXA performance, two-socket value

When it comes to business productivity, more is always better—especially if you can achieve it without using more money, space or energy. Innovative and cost-efficient, the IBM® System x3690 X5 delivers four-socket performance, memory capacity and reliability features in a breakthrough two-socket system that incorporates Intel® Xeon® processors and fifth-generation IBM X-Architecture® (eX5) technology. By purchasing a system with two fewer sockets, you can cut your licensing costs in half while using less energy for a lower total cost of ownership. And you won't have to trade performance for a denser form factor. The x3690 X5 offers leadership performance, including the ability to handle 12 percent more database transactions per minute than industry-standard two-socket servers.[1]

The x3690 X5 also offers simple-to-deploy, preconfigured systems that are optimized specifically for database workloads or virtualized environments. x3690 X5 Database Optimized Systems offer the right balance of processing power, memory and high-IOPS, high-capacity storage technology for your database workloads. x3690 X5 Virtualization Optimized Systems with embedded VMware vSphere 4.1 come standard with MAX5 for unmatched memory capacity in a two-socket system, allowing you to increase the size and quantity of your virtual machines.

Unparalleled flexibility

The x3690 X5 features greater flexibility to help you meet changing workload demands as your business grows. With MAX5, double the memory capacity of your two-socket system to 64 DIMM slots. Increase utilization and optimize your investments by fitting 100 percent more virtual machines per system at half the cost per virtual machine with MAX5 memory expansion.1 An easy upgrade path and customizable growth options offer freedom of choice—for example, you can add more memory without having to purchase unneeded processing.

Simplified systems and power management

Comprehensive systems and power management capabilities make the x3690 X5 easy to own and even easier to operate. Advanced light path diagnostics offer proactive problem solving and faster time to repair, and remote access capabilities enable you to manage, monitor and troubleshoot from virtually anywhere. IBM Systems Director provides easy-to-use tools that can simplify management of both physical and virtual resources. Equally important, an energy-smart design helps increase performance while reducing power consumption—get as much as 45 percent more performance per watt in transactional database processing.[1] And IBM Systems Director Active Energy Manager™ can help you better monitor and measure power consumption to reduce wattage and costs.

The x3690 X5 delivers a level of reliability typically found only in four-socket systems.

Peace of mind

The x3690 X5 offers a level of reliability typically found only in four-socket systems. IBM OnForever™ reliability features like hot-swap, redundant power and cooling, Predictive Failure Analysis and QPI fail-down help you avoid interruptions and maximize uptime of your mission-critical workloads. In addition, features such as Memory ProteXion, Chipkill error correction, memory scrubbing, and memory mirroring can help prevent data loss for maximum memory integrity.

Select configurations of the x3690 X5 are part of the IBM Express Advantage® Portfolio designed to meet the needs of midsized businesses. Easy to manage, Express® models and configurations vary by country.

IBM System x3690 X5 at a glance

Form factor/height	Rack/2U per chassis
Processor (max)	Intel Xeon up to 2.27 GHz (8 core)/1066 MHz memory access
Number of processors (std/max)	1/2 per chassis
Cache (max)	Up to 24 MB
Memory (max)	Up to 512 GB PC3-10600 DDR III
Expansion slots	4 total PCI half-length
Disk bays (total/hot swap)	16/16 2.5" Serial Attached SCSI (SAS) or 24/24 1.8" SAS SSD DASD
Maximum internal storage	800 TB SAS per chassis (supports 73.4 GB, 146.8 GB, 300 GB and 500 GB hard disk drives, 50 GB SSD),
Network interface	Integrated dual Gigabit Ethernet with TCP-IP off-load engine
Power supply (std/max)	675 W 220 V 1/4
Hot-swap components	Power supplies, fans, hard disk drives
RAID support	Integrated RAID-0, -1, optional RAID-5
Systems management	Alert on LAN 2, automatic server restart, IBM Director, IBM ServerGuide, IMM, light path diagnostics (independently powered), predictive failure analysis on hard disk drives, processors, VRMs, fans and memory, Wake on LAN, dynamic system analysis
Operating systems supported	Microsoft® Windows® Server 2008 (Standard, Enterprise and Datacenter editions 64-bit), 64-bit Red Hat Enterprise Linux® and SUSE Enterprise Linux, (Server and Advanced Server), VMware vSphere
Limited warranty	3-year customer replaceable unit and on-site limited warranty

For more information

World Wide Web

U.S. **ibm.com**/systems/x/

Canada **ibm.com**/systems/ca/en/servers/x/index.html

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Route 100
Somers, NY 10589

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[1] Based on IBM comparison between a two-socket IBM System x3690 X5 without MAX5 and a two-socket x3690 X5 with MAX5.

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